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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,379	01/22/2001	Bertram Gunzelmann	GR 98 P 8060 P	2354

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EXAMINER	
AHN, SAM K	

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/767,379	GUNZELMANN ET AL.	
	Examiner	Art Unit	
	Sam K. Ahn	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment, received on 11/01/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4 and 5* is/are allowed.

6)☒ Claim(s) *1,2 and 6* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see p.9-10, filed 11/01/04, with respect to the rejection(s)of claim(s) 1-2 and 4-7 under 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sourour et al., USP 6,363,105 B1 (Sourour) and Rodal, USP 5,883,596.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sourour et al., USP 6,363,105 B1 (Sourour) in view of Rodal, USP 5,883,596.

Regarding claim 1, Sourour teaches a communication acquisition method (see Fig. 8A), which comprises: correlating a received binary-coded spread sequence (802) arriving at a frequency f and having m bits (N-1 bits) with a locally generated spread sequence ($A_m \sim A_{m+N-1}$ and $C_m \sim C_{m+N-1}$,) having m bits (N-1 bits), the locally generated spread sequence having k sections (two sections, note col.5, lines 43-65), the correlating step comprising the following steps:

storing the received binary-coded spread sequence (804), splitting the stored received binary-coded spread sequence into k (two) sections, and correlating the k sections of the stored received binary-coded spread sequence with corresponding k (two) sections of the locally generated spread sequence (A_m ~ A_{m+N-1} and C_m ~ C_{m+N-1}), wherein m and k are integers greater than 1, and k is smaller than m (since k is two, it is smaller than m which is larger than two, as shown in the figure). Although Sourour suggests wherein the correlating step may function at a rate above the sampling rate (note col.7, lines 7-13), Sourour does not explicitly teach wherein the correlating step is taken place at a frequency of k*f.

Rodal teaches a receiver oversampling a received signal for correlation (see 18 in Fig.1 and note col.4, lines 13-18). Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Sourour's system by having the sampler of Rodal coupled to the input (802), thus correlating at the frequency of 2*f for the purpose of correlating at a Nyquist rate, as taught by Rodal (note col.4, lines 19-38).

Regarding claim 2, Sourour in view of Rodal teaches all subject matter claimed, as applied to claim 1. Sourour further teaches upon correlating each section of the stored received binary-coded spread sequence (804), shifting the bits of a respective section by one bit to replace the least significant bit (2M coupled to 802) of a first section variant (A_m ~ A_{m+N-1}) by a succeeding bit of the received

binary-coded spread sequence (from 802) and to shift a most significant bit (delay element coupled to A_m) of the first section variant to a position of the least significant bit (delay element coupled to 844) of a succeeding section variant (C_m ~ C_{m+N-1}) (note col.5, lines 34-36).

Regarding claim 6, teaches all subject matter claimed, as applied to claim 2. Sourour further teaches summing (813,814) the correlation results obtained per section correlation step over k (two) section correlation steps to obtain a count result (output of 812); repeating the shifting step m-1 times for obtaining m-1 count results (repeating until the received signal has been shifted to be compared with the taps, note col.7, lines 33-41); and carrying out a maximum search over all the m count results (which is an obvious function of well-known correlators).

Allowable Subject Matter

3. Claims 4 and 5 are allowed.

4. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn
3/31/05